

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A vertebral arthrodesis device comprising:

at least one pin designed to be positioned along vertebrae that are to be immobilized; and

at least one screw parts for anchoring ~~the~~said pin to the vertebrae, each screw, ~~including: anchoring part presenting a head that delimits a cavity for receiving the pin; and that receives tightening means of the pin in said cavity, the assembly allowing the possibility of clearing the pin with relation to the anchoring part before the tightening of said tightening means, and the possibility of immobilizing said head with relation to said anchoring part in a given position, when said tightening is performed;~~

~~The device characterized in that:~~

at least one ring having a substantially~~The device comprises rings in a spherical outer surface and form in a number equal to that of the anchoring parts, each ring presenting an inside diameter allowing sliding engagement on the pin and a plurality of slots distributed on its periphery, said slots extending between an outer surface of the ring and said inside diameter and opening alternatively at one of a plurality of longitudinal openings of said inside diameter;~~

wherein the ~~The head of each screw anchoring part is shaped so that the said cavity that the head delimits may receive the at least one ring one of the said rings with snap-on installation, and presents at least two lateral threaded holes opening from its proximal surface; and~~

Each anchoring part comprises a clamping ring shaped for positioning on said head by overlapping said ring, said clamping ring comprising lateral holes appropriate for coinciding with the threaded holes of the head and for receiving the tightening screws that can be screwed in these threaded holes, said clamping ring furthermore presenting a cone-shaped central aperture allowing the clamping ring to come into contact with the ring in the course of tightening said screws, so that said clamping ring tightens said ring between itself and said head.

2. (Currently Amended) The device according to claim 1, wherein characterized in that the head of each screw anchoring part comprises at least one slot opening in the bottom of the said cavity, giving the cavity a slight flexibility in a direction perpendicular to that according to which the said cavity opens on the outside of the head.

3. (Currently Amended) The device according to claim 2, wherein characterized in that the head of each screw anchoring part comprises two lateral slot openings slots opening in the bottom of the said cavity.

4. (Currently Amended) The device according to claim 3, wherein characterized in that each lateral slot opening is inclined toward in the direction of the other slot openings so that these slots converge in the direction of the bottom of the cavity.

5. (Currently Amended) The device according to claim 1, wherein characterized in that the cavity of each screw anchoring part is delimited by a wall in the form of a

hollow sphere segment ~~having~~ presenting a diameter slightly less than the outer diameter ~~that~~ of each ring.

6. (Currently Amended) The device according to claim 5, ~~wherein characterized in that the cavity of each screw anchoring part is bordered by two lateral undercuts in the form of a segment of a hollow sphere, allowing, in a snap-on installation position of the ring, clearance of the pin with relation to the corresponding anchoring part.~~

7. (Currently Amended) The device according to claim 1, ~~wherein characterized in that the head of each screw anchoring part presents an enlarged form extending in a direction perpendicular to the direction according to which the cavity opens on the outside of the head, so that the form delimits includes two thick lateral walls, in the proximal surfaces of which said, each lateral wall including at least one threaded hole holes are provided.~~

8. (New) The device of claim 1, wherein the at least one ring includes a plurality of slots distributed on its periphery.

9. (New) The device of claim 8, wherein the slots of the at least one ring extend between the outer surface of the ring and the inside diameter of the ring.

10. (New) The device of claim 9, wherein each of the slots of the at least one ring open at one of the longitudinal openings, and each adjacent slot opens at the opposite longitudinal opening.

11. (New) The device of claim 1, wherein the head further includes:

at least two lateral threaded holes;

a clamping ring shaped for positioning on the head by overlapping the at least one ring and having at least two holes configured to align with the at least two lateral threaded holes of the head when the clamping ring is positioned on the head; and

at least two threaded tightening members for securing the clamping ring to the head by passing the tightening members through the at least two holes of the clamping ring and into the threaded holes of the head.

12. (New) A vertebral arthrodesis device, comprising:

at least one pin configured to be positioned along two or more vertebrae;

at least one ring having a through hole for receiving the at least one pin, wherein the through hole includes two longitudinal openings disposed on opposite sides of the at least one ring, the at least one ring having an inside diameter configured to allow sliding engagement with the at least one pin and an outer surface having a substantially spherical shape; and

at least two screws, each screw including:

a head that includes a cavity for receiving one of the at least one rings in sliding engagement with the pin, wherein the cavity includes an inner surface having a

partially spherical contour configured to engage the outer surface of the at least one rings.

13. (New) The device according to claim 12, wherein the head of each screw comprises at least one slot opening in the bottom of the cavity, giving the cavity a slight flexibility in a direction perpendicular to that according to which the cavity opens on the outside of the head.

14. (New) The device according to claim 13, wherein the head of each screw comprises two lateral slot openings in the bottom of the cavity.

15. (New) The device according to claim 14, wherein each lateral slot opening of the head of the screw is inclined towards the other slot opening.

16. (New) The device according to claim 12, wherein the cavity of each screw is delimited by a wall in the form of a hollow sphere segment having a diameter slightly less than an outer diameter of each ring.

17. (New) The device according to claim 16, wherein the cavity of each screw is bordered by two lateral undercuts in the form of a segment of a hollow sphere.

18. (New) The device according to claim 12, wherein the head of each screw includes two lateral walls, each lateral wall including at least one threaded hole.

19. (New) The device of claim 12, wherein the at least one ring includes a plurality of slots distributed on its periphery.

20. (New) The device of claim 19, wherein the slots of the at least one ring extend between the outer surface of the ring and the inside diameter of the ring.

21. (New) The device of claim 20, wherein each of the slots of the at least one ring open at one of the longitudinal openings, and each adjacent slot opens at the opposite longitudinal opening.

22. (New) The device of claim 12, wherein the head further includes:
at least two lateral threaded holes;

a clamping ring shaped for positioning on the head by overlapping the at least one ring and having at least two holes configured to align with the at least two lateral threaded holes of the head when the clamping ring is positioned on the head; and

at least two threaded tightening members for securing the clamping ring to the head by passing the tightening members through the at least two holes of the clamping ring and into the threaded holes of the head.